IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

1. (Previously Presented) A non-aqueous electrochemical apparatus where the difference (γl-γse) between the surface tension γl of electrolyte and the surface free energy γse of electrode is not more than 10 dynes/cm, wherein γl is more than γse.

2. (Previously Presented) A non-aqueous electrochemical apparatus where the difference (γl-γss) between the surface tension γl of electrolyte and the surface free energy γss of separator interposed between electrodes is not more than 10 dynes/cm, wherein γl is more than γss.

3. (Previously Presented) A non-aqueous electrochemical apparatus where the difference (γl-γse) between the surface tension γl of electrolyte and the surface free energy γse of

electrode is not more than 10 dynes/cm and the difference (γ1-γss) between the surface tension γ1 of electrolyte and the surface free energy γss of separator is not more than 10 dynes/cm, wherein γ1 is more than γse and γ1 is more than γss.

4. (Previously Presented) A non-aqueous electrochemical apparatus according to claim 1, wherein the surface tension γ1 of electrolyte is 10-45 dynes/cm.

5. (Previously Presented) A non-aqueous electrochemical apparatus comprising solid elements having a surface free energy of 1-35 dynes/cm where the surface tension of electrolyte is 10-45 dynes/cm and is greater than the surface free energy of the solid elements.

6. (Previously Presented) A non-aqueous electrochemical apparatus according to claim 5, wherein the solid elements are electrodes containing a carbon material.

7. (Previously Presented) A non-aqueous electrochemical apparatus according to claim 6, wherein the electrolyte comprises a surface active agent.

8. (Previously Presented) A non-aqueous electrochemical apparatus according to claim 7, wherein the surface active agent is a fluorine-containing surface active agent.

9. (Previously Presented) A non-aqueous electrochemical apparatus according to claim 8, wherein the fluorine-containing surface active agent comprises at least one compound selected from the group consisting of fluoroalkyl(C2-C20)carboxylic acids, disodium N-perfluorooctanesulfonylglutamate, sodium 3-[fluoroalkyl(C6-C11)oxy]-1-alkyl(C3-C4)sulfonate, sodium 3-[ω-fluoroalkanoyl(C6-C8)-N-ethylamino]-1-propanesulfonate, N-[3-(perfluorooctanesulfonamide)propyl]-N,N-dimethyl-N-carboxymethylene ammonium betaine, perfluoroalkylcarboxylic acids (C7-C13), perfluorooctanesulfonic acid diethanolamide, perfluoroalkyl(C4-C12)sulfonates (Li, Na, K), N-propyl-N-(2-hydroxyethyl)perfluorooctanesulfonamide, perfluoroalkyl(C6-C10)sulfonamidopropyltrimethylammonium salts, perfluoroalkyl(C6-C10)-N-ethylsulfonylglycine salts (K), bis(N-perfluoro-octylsulfonyl-N-ethylaminoethyl) phosphate, monoperfluoroalkyl(C6-C16)ethylphosphoric acid esters, and perfluoroalkylethylene oxide adducts.

10. (Previously Presented) A non-aqueous electrochemical apparatus according to claim 9, wherein the fluorine-containing surface active agent is shown by the formula (1): $C_nF_{2n+1}SO_2N(C_mH_{2m+1})CH_2CH_2O(CH_2CH_2O)_1H$ in which n is 4-18, m is 1-4, and 1 is 5-25.

11. (Previously Presented) A non-aqueous electrochemical apparatus according to claim 9, wherein the fluorine-containing surface active agent is shown by the formula (2): C_nF_{2n+1}-X-$(CH_2-CH_2-O)_m$-Y in which -X- is -CONH- or $-SO_2NR-$ (R is an alkyl group of 1-8 carbon atoms), -Y is -H, -OH, $-CH_3$, $-PO_3W_2$ or $-SO_3W$ (W is an alkali metal), n is 3-10, and m is 2-100.

12. (Previously Presented) A non-aqueous electrochemical apparatus according to claim 7, wherein the solid elements comprise a negative electrode containing a carbon material and a positive electrode containing a lithium-containing metal oxide, and the electrolyte contains a non-aqueous solvent, a solute and a fluorine-containing surface active agent, said non-aqueous solvent comprising at least one compound selected from the group consisting of ethylene carbonate, propylene carbonate, ethylmethyl carbonate, diethyl carbonate, dimethyl carbonate, γ-butyrolactone, γ-valerolactone, α-acetyl-γ-butyrolactone, α-

methyl-γ-butyrolactone, methyl acetate, ethyl acetate, methyl propionate, ethyl butyrate, butyl acetate, n-propyl acetate, isobutyl propionate and benzyl acetate.

13. (Previously Presented) A non-aqueous electrochemical apparatus according to claim 12, wherein 80% by volume or more of the non-aqueous solvent comprises at least one non-aqueous solvent selected from the group consisting of propylene carbonate and γ-butyrolactone.

14. (Previously Presented) A non-aqueous electrochemical apparatus according to claim 7, wherein the non-aqueous electrolyte additionally contains a carbonic acid ester additive or a sulfur compound additive.

15. (Previously Presented) A non-aqueous electrochemical apparatus according to claim 7, wherein the non-aqueous electrolyte contains a non-aqueous solvent, a solute and a surface active agent, and the non-aqueous solvent contains a plurality of cyclic compounds and the solute is a compound containing lithium as a cation component.

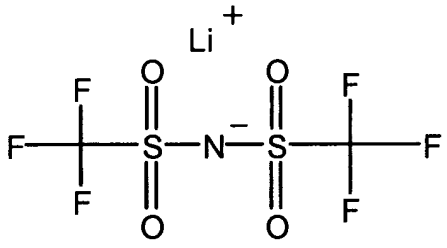
16. (Previously Presented) A non-aqueous electrochemical apparatus according to claim 15, wherein the plurality of cyclic compounds is a mixture of at least two compounds selected from the group consisting of cyclic esters, cyclic ethers, cyclic acid anhydrides and derivatives of these compounds.

17. (Previously Presented) A non-aqueous electrochemical apparatus according o claim 15, wherein the surface active agent is a fluorine-containing surface active agent.

18. (Previously Presented) A non-aqueous electrochemical apparatus according to claim 16, wherein at least one of a plurality of the cyclic compounds has a melting point of not higher than -20°C.

19. (Previously Presented) A non-aqueous electrochemical apparatus according to claim 16, wherein the cyclic ester is selected from the group consisting of cyclic carbonic acid esters, cyclic carboxylic acid esters, cyclic phosphoric acid esters, cyclic phosphorous acid esters, cyclic boric acid esters, cyclic sulfurous acid esters, cyclic sulfuric acid esters, cyclic nitrous acid esters, cyclic nitric acid esters, and cyclic silicic acid esters.

20. (Previously Presented) A non-aqueous electrochemical apparatus according to claim 15, wherein the solute contains at least one compound selected from the group consisting of lithium hexafluorophosphate ($LiPF_6$) and lithium tetrafluoroborate ($LiBF_4$) and at least one compound selected from the group consisting of lithium bistrifluoromethanesulfonimide ($(CF_3SO_2)_2NLi$) having the following structural formula (3) and lithium bispentafluoroethanesulfonimide ($(C_2F_5SO_2)_2NLi$) having the following structural formula (4):



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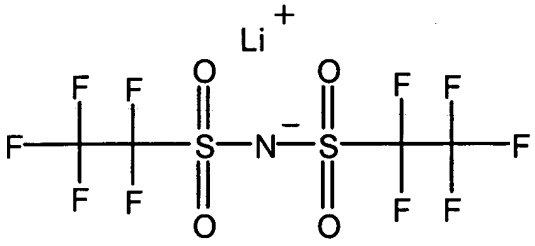

(4)

21. (Previously Presented) A non-aqueous electrochemical apparatus according to claim 14, wherein the carbonic acid ester additive comprises at least one compound selected from the group consisting of vinylene carbonate, phenylethylene carbonate,

phenylvinylene carbonate, diphenylvinylene carbonate, trifluoropropylene carbonate, chloroethylene carbonate, methoxypropylene carbonate, vinylethylene carbonate, catechol carbonate, tetrahydrofuran carbonate, diphenyl carbonate, and diethyl dicarbonate.

22. (Previously Presented) A non-aqueous electrochemical apparatus according to claim 14, wherein the sulfur compound additive comprises at least one compound selected from the group consisting of ethylene sulfite, ethylene trithiocarbonate, vinylene trithiocarbonate, catechol sulfite, tetrahydrofuran sulfite, sulfolane, 3-methylsulfolane, sulfolene, propanesultone, and 1,4-butanesultone.

23. (Previously Presented) A non-aqueous electrochemical apparatus according to claim 2, wherein the surface tension γl of electrolyte is 10-45 dynes/cm.

24. (Previously Presented) A non-aqueous electrochemical apparatus according to claim 3, wherein the surface tension γl of the electrolyte is 10-45 dynes/cm.

25. CANCELLED

26. (Previously Presented) A non-aqueous electrochemical apparatus comprising a fluorine-containing surface active agent according to formula (2) C_nF_{2n+1}-X-$(CH_2$-CH_2-$O)_m$-Y in which -X- is -CONH-, -Y is -H, -OH, $-CH_3$, $-PO_3W_2$ or $-SO_3W$ (W is an alkali metal), n is 3-10, and m is 2-100.

27. (Previously Presented) A non-aqueous chemical apparatus according to claim 11, wherein -X- is -CONH-.

28. (Previously Presented) A non-aqueous electrochemical apparatus comprising solid elements having a surface free energy of 1-35 dynes/cm where the surface tension of electrolyte is 10-45 dynes/cm, wherein

the solid elements are electrodes containing a carbon material; and

the electrolyte contains a fluorine-containing surface active agent, comprising at least one compound selected from the group consisting of fluoroalkyl(C2-C20)carboxylic acids, disodium N-perfluorooctanesulfonylglutamate, sodium 3-[fluoroalkyl(C6-C11)oxy]-1-alkyl(C3-C4)sulfonate, sodium 3-[ω-fluoroalkanoyl(C6-C8)-N-ethylamino]-1-propanesulfonate, N-[3-(perfluoro-octanesulfonamide)propyl]-N,N-dimethyl-N-carboxymethylene

ammonium betaine, perfluoroalkylcarboxylic acids (C7-C13), perfluorooctanesulfonic acid diethanolamide, perfluoroalkyl(C4-C12)sulfonates (Li, Na, K), N-propyl-N-(2-hydroxyethyl)perfluorooctanesulfonamide, perfluoroalkyl(C6-C10)sulfonamidopropyltrimethylammonium salts, perfluoroalkyl(C6-C10)-N-ethylsulfonylglycine salts (K), bis(N-perfluoro-octylsulfonyl-N-ethylaminoethyl) phosphate, monoperfluoroalkyl(C6-C16)ethylphosphoric acid esters, and perfluoroalkylethylene oxide adducts, wherein the fluorine-containing surface active agent is shown by the formula (2): C_nF_{2n+1}-X-$(CH_2$-CH_2-$O)_m$-Y in which -Y is -H, -OH, $-CH_3$, $-PO_3W_2$ or -SO_3W (W is an alkali metal), n is 3-10, and m is 2-100, and -X- is -CONH-.

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